On motion, the Society resolved to attend the funeral of Dr. Morton.

Mr. Peale called the attention of members to a small tract which had been laid on the table by the Librarian, Mr. C. B. Trego, on the title page of which there was a print of an ancient British Torque collar, and desired them to notice the striking similarity that existed between it and the gold rings, of African manufacture, exhibited at the last meeting of the Society by Mr. W. P. Du Bois, assistant assayer of the Mint, United States.

The pamphlet states that the collar (of which a plate is given on the title page) is made of brass, and that they have been found made of gold and bronze.

The African rings are of native manufacture, and twisted throughout nearly their entire length, leaving only a small part of each end plain and round, exhibiting a similitude which is not identical, only in the fact that the African rings are not bent into hooks at each extremity, as in that of British manufacture.

Mr. Peale adverted to the singular circumstance of such identity of form, in rings made in parts of the earth so widely separated, and in periods of time so remote as that of the ancient British and modern Africans; and stated that he had seen a gold bracelet of East Indian manufacture, which was similar in construction, so far as twisted strands of metal would present the same general form.

Pending nominations, from Nos. 256 to 259, and new nomination, No. 260, were read.

Stated Meeting, June 20.

Present, seventeen members.

Dr. Patterson, President, in the Chair.

Letters were read:—

From Peter M'Call, dated Fourth street, 19th June, 1851, acknowledging the receipt of notice of his election as a member of this Society:—

From the Society of Antiquaries, dated Somerset House, 28th March, 1851, acknowledging the receipt of the Proceedings of this Society, No. 45.

From the Royal Geographical Society of Cornwall, dated Penzance, 6th May, 1851, announcing the transmission of a donation to this Society, and acknowledging the receipt of the Transactions and Proceedings of this Society:—

From the First Class of the Royal Institute of Sciences, Belles-Lettres and Arts, of the Netherlands, dated Amsterdam, 31st October, 1850, announcing a donation to this Society:—

From the Batavian Society of Sciences, dated Haarlem, 24th March, 1851, accompanying a donation, and acknowledging the receipt of Vol. X. Part I., of the Transactions of this Society: and—

From Isaac Remington, M.D., Secretary of the Medical Society of the State of Pennsylvania, enclosing a copy of a vote of thanks to this Society, for the use of the Hall at the late session of the State Medical Society.

The following donations were announced:—

FOR THE LIBRARY.

Verhandelingen der Eerste Klasse van het Koninklijk-Nederlandsche Instituut van Wetenschappen, Letterkunde, en Schoone Kunsten, te Amsterdam. Derde Reeks. Deel 2 and 3. Amsterdam, 1850. 4to.—*From the Royal Netherlands Institute of Sciences, Belles Lettres and Arts.*

Tijdschrift voor de Wis-en Natuurkundige Wetenschappen, uitgegeven door de Eerste Klasse van het Koninklijk-Nederlandsche Instituut van Wetenschappen, Letterkunde, en Schoone Kunsten. Derde Deel. Aflevering 3 and 4. Amsterdam, 1850. 8vo. *From the same.*

Jaarboek van het Koninklijk-Nederlandsche Instituut van Wetenschappen, Letterkunde en Schoone Kunsten, voor 1850. Amsterdam. 8vo.—*From the same.*

Natuurkundige Verhandelingen van de Hollandsch Maatschappij der Wetenschappen te Haarlem. Tweede Verzameling. VII. Deel. Leiden, 1851. 4to.—*From the Batavian Society of Sciences at Haarlem.*

Bulletin de la Société de Géographie. Troisième Série. Tome XIV. Paris. 8vo.—*From the Geographical Society of Paris.*

Annales des Mines. Quatrième Série. Tome XVIII. 6 livraison de 1850. Paris. 8vo.—*From the Engineers of the Ecole des Mines.*

Recherches sur le Porphyre Rouge Antique, et sur le Syenite Rose d'Egypte. Mémoire sur la Constitution Minéralogique et Chimique des Roches des Vosges. Par M. A. Delesse, Ingénieur des Mines. 1850. 8vo.—*From the Author.*

Proceedings of the Royal Institution of Great Britain, March 28 to May 9, 1851. London. 8vo.—*From the Institution.*

Monthly Notices of the Royal Astronomical Society. Vol. XI. No. 5. March 14, 1851. London. 8vo.—*From the Society.*

Quarterly Journal of the Chemical Society. Vol. IV. No. 13. April 1, 1851. London. 8vo.—*From the Society.*

Quarterly Journal of the Geological Society. Vol. VII. No. 25. Feb. 1, 1851. London. 8vo.—*From the Society.*

Proceedings of the Royal Irish Academy. Vol. IV. Dublin, 1850. 8vo.—*From the Academy.*

Transactions of the Royal Geological Society of Cornwall. Vol. VI. Penzance, 1846. 8vo.—*From the Society.*

Royal Geological Society of Cornwall. Thirty-fourth, Thirty-fifth, Thirty-sixth, and Thirty-seventh Annual Reports of the Council, with the President's Address, and Papers and Notices read to the Society. Penzance, 1847, 8, 9, 50. 8vo.—*From the same.*

Proceedings of the American Association for the Advancement of Science. Fourth Meeting, held at New Haven, August, 1850. Washington and New York. 8vo.—*From the Association.*

The African Repository. Vol. XXVII. No. 5. May, 1851. Washington. 8vo.—*From the American Colonization Society.*

Journal of the Franklin Institute. Third Series. Vol. XXI. Nos. 5 and 6. May and June, 1851. Philadelphia. 8vo.—*From the Institute.*

Cartas para servir de introduction a la Historia Primitiva de las Naciones Civilizadas de la America Setentrional. Por el Abate Don E. Carlos Brasseur de Bourbourg, miembro de la Sociedad Mexicana de Geografia y Estadistica, &c. Mexico, 1851. 8vo.—*From the Author.*

Production of Vital Force: A Discourse delivered before the Massachusetts Medical Society, at their Annual Meeting, May 30, 1849.

By Edward Jarvis, M.D., Fellow of the Society. Boston, 1849. 8vo.—*From the Author.*

On the Comparative Liability of Males and Females to Insanity, and their Comparative Curability and Mortality when Insane. By Edward Jarvis, M.D., of Dorchester, Mass. Utica, 1850. 8vo. *From the same.*

A Collection of Pamphlets, 24 in number, relating to the Public Institutions, Finances, Education and Statistics of the State of Massachusetts, the City of Boston, and the Town of Dorchester.—*From Dr. Edward Jarvis.*

Quæstionum Ionicarum Liber. Quo novam Hippocratis editionem indicit Auctor Justus Florianus Lobeck Dr. Fasciculus primus. Regimontii Prussorum. 1850. 8vo.—*From the Author.*

Historical and Statistical Information respecting the History, Condition and Prospects of the Indian Tribes of the United States: collected and prepared under the direction of the Bureau of Indian Affairs, per Act of Congress of March 3, 1847. By Henry R. Schoolcraft, LL.D. Published by authority of Congress. Part I. Philadelphia, 1851. 4to.—*From L. Lea, Esq., Commissioner of Indian Affairs.*

Key to the Indian Language of New England, in the Etchemin or Passamaquoddy Language, spoken in Maine, and St. John's, New Brunswick. By Joseph Barratt, M.D. No. 1. Middletown, Conn. 1850. 8vo.—*From the Author.*

Contributions to Conchology, No. 9: with Catalogue of the Land Shells which inhabit Jamaica. By C. B. Adams, Professor of Zoology in Amherst College, Mass. April, 1851. 8vo.—*From the Author.*

The Medical News and Library. Vol. IX. No. 102. June, 1851. Philadelphia. 8vo.—*From Blanchard & Lea.*

The Plough, the Loom, and the Anvil. Vol. III. Nos. 11 and 12. May and June, 1851. Philadelphia. 8vo.—*From the Editor.*

Reports of the Pennsylvania Hospital for the Insane, for the Years 1846, 7, 8, 9, 50. By Thomas S. Kirkbride, Physician to the Institution. Philadelphia, 1851. 8vo.—*From the Author.*

First Annual Report of the President and Directors of the Bellefontaine and Indiana Rail Road Company; with Statement of the Treasurer, and Report of the Chief Engineer, January, 1851. Cleveland, Ohio. 8vo.—*From W. Milnor Roberts, Esq., Chief Engineer.*

The Documentary History of the State of New York; arranged un-

der the direction of the Hon. Christopher Morgan, Secretary of State. By E. B. O'Callaghan, M.D. Vol. III. Albany, 1850. 8vo.—*From the Regents of the University of the State of New York.*

Sixty-fourth Annual Report of the Regents of the University of the State of New York. Made to the Legislature, March 1, 1851. Albany. 8vo.—*From the same.*

Professor Frazer announced the death of Joel B. Reynolds, a member of this Society, who died on the 16th May last, in the 25th year of his age. His death was occasioned by the explosion of a steam boiler. Prof. F. described the circumstances of the melancholy accident, and accompanied the announcement with a notice of the scientific pursuits and merits of the deceased.

Mr. Justice announced the death of Mr. Wm. Hembel, a member of this Society, who died on the 12th of the present month, in the 88th year of his age.

The following letter from Dr. Locke, on the subject of a new method of recording time and astronomical observations on the register of an electro-magnetic telegraph, was read, and a specimen of the work shown.

Cincinnati, June 3d, 1851.

To the American Philosophical Society.

Although I have for some time ceased to correspond with your learned institution, yet I have not ceased to labour in my small way for the advancement of those objects which are interesting to all of us. I have lately been engaged in polishing up my chronographic invention of 1848, especially as regards cylindrical registering of astronomical observations, with reference to local or fixed observatory operations. I announced last autumn, in the National Intelligencer, my method of regulating the cylinder or the equatorial clock, by means of electro-magnetic power derived from the sideral clock, and acting in aid of a weight. By this means the cylinder or clock, adjusted to a rate perceptibly too slow, receives a supplementary power by consecutive impulses, equalized by an intermediate spring, and resulting in a measured motion of great uniformity. During the winter I devised a new mode of working the electro-telegraphic registering upon the cylinder. This will be best understood by adverting to the Morse register, in which the fillet of paper passes snugly over a

roller, with a narrow groove corresponding to the point of the reciprocating stile or pen operating on the outside. This groove enables the pen to indent and crease the paper, by pushing it downward without resistance. These indentations, thus made, were to some extent indefinite and rather illegible, unless when the light is received tangentially; and were always liable to become obscure or obliterated by pressure and long keeping.

In registering upon a sheet of paper enveloping a revolving cylinder, this use of a groove is impracticable; and the paper lying on a hard surface could with difficulty be marked by dot or indentation. As a substitute for the groove, I have interposed a covering of velvet, or the like substance, between the paper and the solid cylinder, and I am thus enabled to mark by sharp needle punctures, in a manner, as I think, scarcely needing further attempts at improvement.

I enclose you a specimen cut from a sheet two feet square, and containing the work of four hours. This specimen is a zone or belt, including the circumference of the cylinder, which revolves once per minute, and receives in that time sixty punctures, distant from each other about ten millimetres. When the sheet is cut open and developed from the cylinder, it presents a table having readings by intersections derived from a vertical column on the left, and a horizontal column at the top. On the left the column of seconds reads from 0 to 60, and on the top the headings are hours and minutes. Thus it appears that an observation, or a puncture intermediate between any two seconds, can be read as easily in the developed sheet as on the cylinder. The successive spirals or revolutions of minutes return very close to each other ($2\frac{1}{2}$ millimetres or one-tenth of an inch), and the uniformity of motion of the cylinder is most severely tested by the lines which the returning punctures make more or less parallel to the cylinder's axis. This sample was produced without the magnetic regulator, the cylinder running with a free flying motion. It is remarkable, that with this flowing motion we should be enabled to generate a helix 500 feet long, and arrive at a final predicted point within five millimetres or two-tenths of an inch; or, in other words, after four hours of work, in which 14,400 punctures had been made, the lines of returning dots had at no point departed half of a second from a line parallel to the axis of the cylinder. The several spaces representing the seconds, differ from the 60th part of the circumference of the cylinder not more than $\frac{1}{2880}$th part.

Means by which this Uniformity of Continuous Motion has been attained.

1. Screw axes for progressive motion, to generate a spiral, have been rejected.

2. The progressive motion is made by the registering head bearing the magnet and stile, or puncturing pen, and travelling on rails like the V bars of a turning lathe.

3. The progressive motion of this registering head is not derived from the rotation of the cylinder, but that head moved independently by means of a little clock being attached to running cord of the same.

4. The puncturing pen acts perpendicularly to the surface of the cylinder, and having a joint by which it yields to the cylinder's motion, it offers no retarding drag.

5. The cylinder is, in all respects, left free to revolve, and its frictions, including all of its wheels, revolve or return, at short intervals, into themselves. Incidentally this punctured sheet, by being interposed between the eye and a candle, and moved rapidly in curves and waves, exhibits lines in a curiously figured manner, showing the candle flame as a screw, sometimes right handed and sometimes left handed, &c.

Very respectfully yours,
JOHN LOCKE.

Mr. Justice laid upon the table for inspection, two daguerreotypes of the moon, taken by Mr. Whipple, of Boston, through the refracting telescope of the Cambridge Observatory; one representing it in its first quarter, the other when nearly at the full.

He mentioned, that to those acquainted with the different localities of the moon's surface, the accuracy of the pictures is highly gratifying when placed in the direct rays of the sun, and viewed through a magnifying lens. Hitherto any attempt to portray the scenery of the moon by drawings, has been entirely unsatisfactory in conveying a true impression of its diversified appearance through a telescope; but he now hoped, from the constant improvement in the art of daguerreotyping, that an enlarged picture of the moon's disc may be obtained, from which engraved maps might be made, so that the selenography of our satellite may be studied in our schools, in conjunction with the geography of our own planet.

Mr. Trego remarked, that some recent excursions into the country in different parts of south-eastern Pennsylvania, and a small portion of New Jersey, near the Delaware, had afforded him an opportunity of making some observations upon the habits of the insect commonly called *locust* (*cicada septendecem*), and as to the extent of the region over which their present periodical visitation extends. He hoped that from further inquiry, and the observations of others, the boundaries of the region visited by the locusts this year may be approximately ascertained. Among other facts noticed by him, he mentioned that the low sandy grounds along the Delaware and Susquehanna rivers appeared to be almost entirely exempt from the visits of this insect, while on the neighbouring higher and more clayey or tenacious soils they were abundant. He had observed that the twigs of the young chestnut trees appeared to be a favourite place of the female for the deposit of her eggs, but that many other forest and fruit trees were also chosen for this purpose, not, however, so universally as the chestnut. Pines, and other resinous trees, appeared to be nearly or quite exempt from their attacks.

Prof. Tucker remarked, that he had seen the twigs of the red cedar (*juniperus virginiana*) affected by the punctures of the female locust.

Dr. Bridges observed, that a reason why the locust avoids a very sandy soil may probably be found in the fact, that when about to emerge from the earth, the insect forms for its passage a perpendicular cylindrical perforation in the soil, by which it can ascend and descend at pleasure, until it finally leaves the ground. The inside of this tube is plastered smoothly with clay, which, in a sandy soil, could not readily be effected, and in the loose sand these perforations would not be sufficiently firm or durable for the purposes of the insect.

Further remarks on the subject were made by Prof. Frazer, Mr. Justice, Dr. B. H. Coates, and others.

Pending nominations, from No. 256 to No. 261, inclusive, were read.